PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43*bis*.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/JP2004/014996	05.10.2004	11.11.2003

International Patent Classification (IPC) or both national classification and IPC
G06F1/00

Applicant
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notifed the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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ATTACHMENT "H"

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

   ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

   a. type of material:

   ☐ a sequence listing

   ☐ table(s) related to the sequence listing

   b. format of material:

   ☐ in written format

   ☐ in computer readable form

   c. time of filing/furnishing:

   ☐ contained in the international application as filed.

   ☐ filed together with the international application in computer readable form.

   ☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

Box No. II Priority

1. ☒ The following document has not been furnished:

   ☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

   ☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

   Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. ☐ It has not been possible to consider the validity of the priority claim because a copy of the priority document was not available to the ISA at the time that the search was conducted (Rule 17.1). This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

4. Additional observations, if necessary:

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has:

   ☒ paid additional fees.

   ☐ paid additional fees under protest.

   ☐ not paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is

   ☐ complied with

   ☒ not complied with for the following reasons:

   see separate sheet

4. Consequently, this report has been established in respect of the following parts of the international application:

   ☒ all parts.

   ☐ the parts relating to claims Nos.

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	2-15, 17-42
	No:	Claims	1, 16, 43-46
Inventive step (IS)	Yes:	Claims	3-12, 31-42
	No:	Claims	1, 2, 13-1-46
Industrial applicability (IA)	Yes:	Claims	1-15, 31-46
	No:	Claims	

2. Citations and explanations

see separate sheet

Reference is made to the following documents:

D1: US 2003/208681 A1 (ZHANG ZHENG ET AL) 6 November 2003 (2003-11-06)
D2: US-6 185 684-B1 (MALLOY THOMAS J ET AL) 6 February 2001 (2001-02-06)
D3: US-6 304 715-B1 (ABECASSIS MAX) 16 October 2001 (2001-10-16)
D4: US-6 205 549-B1 (PRAVETZ JAMES D) 20 March 2001 (2001-03-20)
D5: US 2002/099947 A1 (XEROX CORP) 25 July 2002 (2002-07-25)
D6: US 2003/122966 A1 (MARKMAN MICHAEL J ET AL) 3 July 2003 (2003-07-03)
D7: US 2001/055472 A1 (NAKAHARA MASANORI ET AL) 27 December 2001 (2001-12-27)

Re Item IV
Lack of unity of invention

This Authority considers that there are 2 inventions covered by the claims indicated as follows:

I: Claims 1-15 and 31-46 which are directed to judging use permission of metadata provided by a metadata provider to be used in conjunction with a content depending on the origin of the metadata,

II: Claims 16-21 which are directed to judging use permission of metadata provided by a metadata provider to be used in conjunction with a content depending on the content of the metadata,

III: Claims 22-30 which are directed to judging revision permission of metadata provided by a metadata provider to be used in conjunction with a content.

The reasons for which the inventions are not so linked as to form a single general inventive concept, as required by Rule 13.1 PCT follow.

The subject-matter of independent claim 1 is already known (see the grounds for this objection below). The requisite unity of invention (Rule 13.1 PCT) therefore no longer exists inasmuch as a technical relationship involving one or more of the same or corresponding special technical features in the sense of Rule 13.2 PCT does not exist between the subject-matter of the following groups of dependent claims:

- claims 2, 31 and 34 are directed towards controlling the use of metadata depending on who provided the metadata,
- claim 16 is directed towards controlling the use of metadata depending on the type of metadata,
- claim 22 is directed towards controlling whether metadata is allowed to be revised.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Group I

1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

1.1 The document D1 discloses (the references in parentheses applying to this document) a method for judging use permission of information ("enforcing file authorization access", paragraph 11) used by one or more terminal apparatuses ("Clients", paragraph 13) which use content ("data files", paragraph 16) provided by a content provider ("block server", paragraph 14) and metadata ("block list", paragraph 19) which is data provided by a metadata provider ("metadata server", paragraph 19) and supplementing the content (implicit, "block list" contains information relative to the block of data requested by the client), the method comprising:

- judging use permission of the metadata based on usage control information regarding use control of the metadata ("privilege, validity period, authority signature and beneficiary", paragraph 23); and
- using the metadata in the case where it is judged that the use of the metadata is permitted in said judging (implicit).

1.2 The document D2 discloses (the references in parentheses applying to this document) a method for judging use permission of information ("document", column 2, line 30) used by one or more terminal apparatuses ("viewer application", column 2, lines 34-35) which use content provided by a content provider (implicit) and metadata

which is data provided by a metadata provider (executor of "the present invention", column 3, line 28) and supplementing the content, the method comprising:

- judging use permission of the metadata ("information", column 2, line 32) based on usage control information ("recipient list", line 28) regarding use control of the metadata (the "information" is "encrypted", column 2, lines 32 implying that only authorised users may access the information); and
- using the metadata (by extracting the document key in order to open the document) in the case where it is judged that the use of the metadata is permitted in said judging (implicit because permission is granted only if recipient is in possession the correct private key).

1.3 The document D3 discloses (the references in parentheses applying to this document) a method for judging use permission of information ("image", column 6, line 34 or "video program", claim 1) used by one or more terminal apparatuses which use content provided by a content provider and metadata ("segment", column 6, line 57 or "video segment address information", claim 1) which is data provided by a metadata provider (implicit) and supplementing the content, the method comprising:

- judging use permission of the metadata based on usage control information regarding use control of the metadata ("would inhibit the player or VRT functions from interfering with that transmission", column 16, lines 57-60); and
- using the metadata in the case where it is judged that the use of the metadata is permitted in said judging (if "condition of value", column 16, line 56 allows this)

1.4 Furthermore, it would appear that documents D4 and D5 also disclose the subject-matter of claim 1, see the corresponding passages cited in the search report.

2 The same reasoning applies, mutatis mutandis, to the subject-matter of the corresponding independent claims 43-46, which therefore are also considered not new.

3 Dependent claims 2, 13-15 do not contain any features which meet the requirements of the PCT in respect of novelty or inventive step, in this regard the cited passages of

the search report and the following reasoning applies.

3.1 Document D1 discloses in paragraph 23 that in the metadata ("token") comprises a signature. In light of this disclosure and of the fact that public key infrastructures are well known in the art to the point that they are implicitly included when electronic signatures are mentioned, claim 1 is not inventive over the disclosure D1 because in order to solve the problem of how to be sure that the metadata is allowed to be used, the first signer identification information identifying a range of a provider of metadata that can be used can be considered to be a revocation list which identifies whether a public-key certificate is valid by listing the non-valid certificates and the second signer identification information identifying the signer of the signature would be the providers certificate. The remaining subject-matter of the claim, ie. the judging of whether the metadata use is permitted based on the metadata provider identified in said first signer identification information (revocation list), said second identification information and signature verification (implicit) would then be a matter of normal procedure for the person skilled in the art in light of the problem above. Therefore claim 2 is not inventive over document D1 (Article 33 (3) PCT).

4 The combination of the features of dependent claims 3-12, 31-42 is neither known from, nor rendered obvious by the available prior art. The reasons are as follows: none of the documents cited in the search report suggest how to solve the problem of how to control usage of metadata in combination with a content in a flexible manner by depending on the "sensitivity" of the content. For example, "sensitive" content such as property content (eg. a movie) should allowed to be integrated only with metadata that allows to search the content without allowing, for example, the skipping of the trailers or company logos introduction sequences whilst "non-sensitive" data should be allowed to be integrated with any metadata suiting the preferences of the user.

Group II

5 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 16 is not new in the sense of Article 33(2) PCT.

5.1 The document D3 further discloses (the references in parentheses applying to this document) a method for judging use permission of information as in point 1.3 of the present communication wherein:

- the usage control information includes reference specification information specifying a reference method of metadata in using content ("segment skip function", claim 2),
- and in said judging, metadata use permission in using content is judged based on the reference specification information ("wherein the prevented control function is a segment skip function", clam 2).

6 Remaining dependent claims 17-21 do not contain any features which meet the requirements of the PCT in respect of novelty or inventive step, in this regard the cited passages of the search report and the following reasoning applies.

- encrypting a content before distribution is well known in the art (see eg. D2, D4, D5 and D6, passage 34)

Group III

7 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 22 does not involve an inventive step in the sense of Article 33(3) PCT.

The document D3 is regarded as being the closest prior art to the subject-matter of claim and discloses a method for judging use permission of information according to claim 1 (see point 1.3).

The subject-matter of claim 22 therefore differs from this known method in that the usage control information includes revision permission information indicating revision permission of metadata, and in said judging, use permission of metadata is judged based on the revision permission information.

The problem to be solved by the present invention may therefore be regarded as how

to protect the usage control information.

The solution proposed in claim 22 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons.

The document D7 discloses a method where a usage control information ("permission information", paragraph 19) includes revision permission information indicating revision permission of metadata ("permission information indicating whether or not to permit execution of edit processing", paragraph 21) , and in said judging, use permission of metadata is judged based on the revision permission information ("only when said judged content corresponds to the content in which said division processing is enabled", paragraph 21).

It would be obvious to the person skilled in the art to combine the teachings of D3 and D7 in order to solve the problem stated above thus arriving at the subject matter of claim 22.

8 Remaining dependent claims 23-30 do not contain any features which meet the requirements of the PCT in respect of novelty or inventive step, in this regard the corresponding cited passages of the search report and the following reasoning applies.

The following is considered common practise in the art:

- use of flags to indicate an editing status of information which needs to be protected (as does the usage control information),
- use of digital signatures to ensure the integrity and which uniquely identify the information which needs to be protected (as does the usage control information),
- use of certificates in combination with digital signatures are used to ensure the identify of the signer,
- limited use or editing privileges based on terminal identification information in order to protect information (as does the usage control information),
- encrypting content and including metadata in the encrypted content in order to

distribute and protect information.